

IN THE CLAIMS:

Claim 1 (Original): A dental appliance worn in a mouth of a user having one or more types of teeth wherein one of the types of teeth is molars wherein the molars are located furthest rearward into the mouth of the user, the dental appliance comprising:

a generally U-shaped base having an occlusal surface wherein the occlusal surface contacts the teeth when the base is worn wherein the base has a thickness defined between a first end and a second end wherein the occlusal surface contacts each molar of the user when the base is worn to prevent the molar from achieving a malocclusion position.

Claim 2 (Original): The dental appliance of Claim 1 further comprising:

a hinge connected to the base wherein the hinge enables the base to be folded.

Claim 3 (Original): The dental appliance of Claim 1 wherein the base is transparent.

Claim 4 (Original): The dental appliance of Claim 1 wherein the occlusal surface is flat.

Claim 5 (Original): The dental appliance of Claim 1 further comprising:

a second base connected to the generally U-shaped base by a fastener wherein the fastener prevents movement between the

generally U-shaped base and the second base.

Claim 6 (Original): The dental appliance of Claim 1 further comprising:

a wire imbedded within the base.

Claim 7 (Original): The dental appliance of Claim 1 wherein the base is constructed from a first material and a second material wherein the first material has a lesser degree of rigidity than the second material.

Claim 8 (Currently amended): A dental appliance worn in a mouth of a user having an upper arch having upper teeth and a lower arch having lower teeth ~~and a tongue~~ wherein one of the upper teeth and the lower teeth are molars, the dental appliance comprising:

a generally U-shaped upper base which contacts upper teeth of the user when the upper base is worn;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn ~~wherein the upper base and the lower base define an interior surface having a concave portion wherein the concave portion has a wall which prevents the tongue of the user from contacting the lower arch when the tongue is in a resting position; and~~

a hinge connecting the upper base and the lower base wherein

the hinge is sized to contact a molar furthest rearward in a mouth of a user to control eruption of the molar.

Claim 9 (Original): The dental appliance of Claim 8 further comprising:

holes within the base wherein the user breathes through the holes.

Claim 10 (Original): The dental appliance of Claim 8 further comprising:

lingual tabs extending from the lower base wherein the lingual tabs extend rearward into the mouth.

Claim 11 (Original): The dental appliance of Claim 8 further comprising:

one or more sockets within the upper base wherein the sockets are sized to fit at least two or more teeth of the user.

Claim 12 (Original): The dental appliance of Claim 8 further comprising:

ribs formed within the upper base wherein the ribs guide the teeth into a correct position.

Claim 13 (Original): The dental appliance of Claim 8 wherein the upper base is constructed from a moisture-absorbent material.

Claim 14 (Original): A dental appliance worn in a mouth of a user having upper teeth and lower teeth wherein the upper teeth and the lower teeth are comprised of one or more types of teeth

wherein one of the types of teeth is molars wherein the molars are located furthest rearward into the mouth of the user, the dental appliance comprising:

a generally U-shaped upper base having an upper occlusal surface wherein the upper occlusal surface contacts the upper teeth and guides the upper teeth into a correct position; and

a generally U-shaped lower base connected to the upper base wherein the lower base has a lower occlusal surface wherein the lower occlusal surface contacts the lower teeth and guides the lower teeth into a correct position and wherein the upper occlusal surface and the lower occlusal surface are adjacent and have a combined thickness wherein the upper occlusal surface contacts each molar of the user when the upper base and the lower base are worn to prevent the molar from achieving a malocclusion position.

Claim 15 (Original): The dental appliance of Claim 14 further comprising:

sockets within the upper base wherein the sockets are square in shape.

Claim 16 (Original): The dental appliance of Claim 14 wherein the upper base is marked to indicate to the user how to position the upper base within the mouth.

Claim 17 (Original): The dental appliance of Claim 14 further

comprising:

a hinge connecting the upper base and the lower base wherein the hinge allows the upper base to be pivoted toward the lower base.

Claim 18 (Original): The dental appliance of Claim 14 wherein the lower base is wider than the upper base.

Claim 19 (Original): The dental appliance of Claim 14 further comprising:

a shield extending from the upper base wherein the shield contacts a front of the mouth.

Claim 20 (Original): The dental appliance of Claim 14 further comprising:

sockets within the upper base wherein the sockets are customized to a shape of the teeth of the user.

Claim 21 (New): A dental appliance worn in a mouth of a user having an upper arch having upper teeth and a lower arch having lower teeth, the dental appliance comprising:

a generally U-shaped upper base which contacts upper teeth of the user when the upper base is worn;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn; and

a hinge attaching the upper base to the lower base wherein

the upper base, the lower base and the hinge are designed by stereolithography.

Claim 22 (New): The dental appliance of Claim 21 further comprising:

a socket within the upper base shaped to correspond to a shape of one of the teeth.

Claim 23 (New): The dental appliance of Claim 21 further comprising:

a socket within the lower base shaped to correspond to a shape of one of the teeth.

Claim 24 (New): The dental appliance of Claim 21 further comprising:

a socket within the upper base wherein the socket is flat.

Claim 25 (New): The dental appliance of Claim 21 further comprising:

a socket within the lower base wherein the socket is flat.

Claim 26 (New): The dental appliance of Claim 21 further comprising:

lingual tabs extending from the lower base wherein the lingual tabs extend rearward.

Claim 27 (New): The dental appliance of Claim 21 further comprising:

holes within the upper base.

Claim 28 (New): The dental appliance of Claim 21 further comprising:

holes within the lower base.

Claim 29 (New): The dental appliance of Claim 21 further comprising:

a labial shield extending from the upper base wherein the labial shield covers the teeth.

Claim 30 (New): A dental appliance worn in a mouth of a user having an upper arch having upper teeth and a lower arch having lower teeth, the dental appliance comprising:

a generally U-shaped upper base which contacts upper teeth of the user when the upper base is worn;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn; and

a hinge attaching the upper base to the lower base wherein the upper base, the lower base and the hinge are designed manually.

Claim 31 (New): The dental appliance of Claim 30 wherein the upper base has a roughened surface.

Claim 32 (New): The dental appliance of Claim 30 wherein the lower base has a roughened surface.

Claim 33 (New): The dental appliance of Claim 30 further

comprising:

a slot within the upper base wherein the slot is sized to receive two or more of the teeth.

Claim 34 (New): The dental appliance of Claim 30 further comprising:

a slot within the lower base wherein the slot is sized to receive two or more of the teeth.

Claim 35 (New): The dental appliance of Claim 30 further comprising:

a rib within the upper base wherein the rib contacts one or more of the teeth to adjust the tooth into a correct position.

Claim 36 (New): The dental appliance of Claim 30 further comprising:

a rib within the lower base wherein the rib contacts one or more of the teeth to adjust the tooth into a correct position.

Claim 37 (New): The dental appliance of Claim 30 further comprising:

a socket within the upper base wherein the socket is shaped to correspond to a shape of one or more of the teeth.

Claim 38 (New): The dental appliance of Claim 30 further comprising:

a socket within the lower base wherein the socket is shaped to correspond to a shape of one or more of the teeth.

Claim 39 (New): The dental appliance of Claim 30 further comprising:

lingual tabs extending rearward from the lower base.

Claim 40 (New): A dental appliance worn in a mouth of a user having an upper arch having upper teeth and a lower arch having lower teeth, the dental appliance comprising:

a generally U-shaped upper base which contacts upper teeth of the user when the upper base is worn;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn; and

a hinge attaching the upper base to the lower base wherein the upper base, the lower base and the hinge are shaped based on a computer-generated digital image of the mouth of the user.

Claim 41 (New): The dental appliance of Claim 40 further comprising:

a rib formed within the upper base wherein the ribs guide the teeth into a correct position.

Claim 42 (New): The dental appliance of Claim 40 further comprising:

a rib formed within the lower base wherein the ribs guide the teeth into a correct position.

Claim 43 (New): The dental appliance of Claim 40 wherein the

upper base is constructed from a moisture-absorbent material.

Claim 44 (New): The dental appliance of Claim 40 wherein the lower base is constructed from a moisture-absorbent material.

Claim 45 (New): The dental appliance of Claim 40 further comprising:

a wire embedded within the upper base.

Claim 46 (New): The dental appliance of Claim 40 further comprising:

a wire embedded within the lower base.

Claim 47 (New): A dental appliance comprising:

a generally U-shaped upper base having a flat occlusal surface;

a generally U-shaped lower base having a flat occlusal surface; and

a hinge attaching the upper base to the lower base wherein the upper base and the lower base are sized to fit users of various types of dentitions.

Claim 48 (New): The dental appliance of Claim 47 wherein the hinge is removably attached to the upper base and the lower base.

Claim 49 (New): The dental appliance of Claim 47 wherein the hinge is more rigid than the upper base and the lower base.

Claim 50 (New): The dental appliance of Claim 47 further

comprising:

holes within the upper base.

Claim 51 (New): The dental appliance of Claim 47 further comprising:

holes within the lower base.

Claim 52 (New): The dental appliance of Claim 47 further comprising:

a labial shield extending from the upper base.

Claim 53 (New): The dental appliance of Claim 47 further comprising:

a cavity formed within the lower base wherein the cavity is sized to receive a tongue of the user.

Claim 54 (New): The dental appliance of Claim 47 further comprising:

a cavity formed within the upper base wherein the cavity is sized to receive a tongue of the user.

Claim 55 (New): The dental appliance of Claim 47 further comprising:

a cavity formed within the upper base and the lower base wherein the cavity is sized to receive a tongue of the user.

Claim 56 (New): A dental appliance worn in a mouth of a user having an upper arch having upper teeth and a lower arch having lower teeth, the dental appliance comprising:

a generally U-shaped upper base which contacts upper teeth of the user when the upper base is worn wherein the upper base has at least one female portion formed at a posterior end of the upper base;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn wherein the lower base has at least one female portion formed at a posterior end of the lower base; and

a hinge having a first end which is inserted into the cavity within the upper base and a second end which is inserted into the cavity within the lower base.

Claim 57 (New): The dental appliance of Claim 56 wherein the hinge is constructed from metal.

Claim 58 (New): The dental appliance of Claim 56 wherein the upper base and the lower base are designed by stereolithography.

Claim 59 (New): The dental appliance of Claim 56 wherein the upper base and the lower base are constructed manually.

Claim 60 (New): The dental appliance of Claim 56 further comprising:

a socket within the upper base wherein the socket is shaped to correspond to a shape of at least one of the teeth of the user.

Claim 61 (New): The dental appliance of Claim 56 further

comprising:

a socket within the lower base wherein the socket is shaped to correspond to a shape of at least one of the teeth of the user.

Claim 62 (New): The dental appliance of Claim 56 wherein the hinge is more rigid than the upper base and the lower base.

Claim 63 (New): The dental appliance of Claim 56 further comprising:

lingual tabs extending from the lower base.

Claim 64 (New): The dental appliance of Claim 56 further comprising:

a labial shield extending from the upper base.

Claim 65 (New): A dental appliance worn by a user having teeth wherein a space is provided between two of the teeth, the dental appliance comprising:

a generally U-shaped base having an occlusal surface wherein the occlusal surface has a projection or a rib formed wherein the projection or the rib rotates teeth, torques teeth or closes a space between the teeth to correct crowding of the teeth of the patient.

Claim 66 (New): The dental appliance of Claim 65 wherein the projection is positioned on the occlusal surface so as to be adjacent to an incisor when the base is worn.

Claim 67 (New): The dental appliance of Claim 65 wherein the projection is positioned on the occlusal surface so as to be adjacent to a molar when the base is worn.

Claim 68 (New): The dental appliance of Claim 65 wherein the occlusal surface is flat in an area surrounding the projection.

Claim 69 (New): The dental appliance of Claim 65 wherein the projection is positioned on the occlusal surface so as to be adjacent to a molar when the base is worn.

Claim 70 (New): The dental appliance of Claim 65 further comprising:

a lingual tab extending rearward from the base.

Claim 71 (New): The dental appliance of Claim 65 wherein the occlusal surface is roughened.

Claim 72 (New): The dental appliance of Claim 65 further comprising:

a wire embedded within the base.

Claim 73 (New): The dental appliance of Claim 65 wherein the base is constructed from a moisture-absorbent material.

Claim 74 (New): The dental appliance of Claim 65 further comprising:

a socket within the occlusal surface wherein the socket is sized to receive one or more teeth of the user.

Claim 75 (New): The dental appliance of Claim 14 wherein the

lower base is marked to indicate to the user how to position the lower base within the mouth.

Claim 76 (New): The dental appliance of Claim 14 wherein the upper base is wider than the lower base.

Claim 77 (New): The dental appliance of Claim 14 further comprising:

sockets within the lower base wherein the sockets are customized to a shape of the teeth of the user.

Claim 78 (New): A dental appliance worn in a mouth of a user having an upper arch having upper teeth and a lower arch having lower teeth, the dental appliance comprising:

a generally U-shaped upper base which contacts the upper teeth of the user when the upper base is worn;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn;

a slot within the lower base or the upper base wherein the slot is sized to receive one or more teeth of the user; and

a hinge connecting the upper base and the lower base.

Claim 79 (New): The dental appliance of Claim 78 wherein the slot is preformed to receive one or more teeth of the user.

Claim 80 (New): The dental appliance of Claim 78 wherein the slot is customized to receive one or more teeth of the user.

Claim 81 (New): The dental appliance of Claim 78 further comprising:

a socket within the lower base or the upper base wherein the socket is preformed to receive one or more teeth of the user.

Claim 82 (New): The dental appliance of Claim 78 further comprising:

a socket within the lower base or the upper base wherein the socket is customized to receive one or more teeth of the user.

Claim 83 (New): The dental appliance of Claim 78 further comprising:

holes within the lower base or the upper base wherein the user breathes through the holes.

Claim 84 (New): The dental appliance of Claim 78 further comprising:

lingual tabs extending from the lower base wherein the lingual tabs extend rearward into the mouth.

Claim 85 (New): The dental appliance of Claim 78 further comprising:

ribs formed within the upper base wherein the ribs guide the teeth into a correct position.

Claim 86 (New): The dental appliance of Claim 78 wherein the upper base is constructed from a moisture-absorbent material.

Claim 87 (New): A dental appliance worn in a mouth of a user

having an upper arch having upper teeth and a lower arch having lower teeth, the dental appliance comprising:

a generally U-shaped upper base which contacts the upper teeth of the user when the upper base is worn;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn;

a cavity formed within the upper base and the lower base wherein the cavity is sized to receive a tongue of the user; and

a hinge connecting the upper base and the lower base.

Claim 88 (New): The dental appliance of Claim 87 further comprising:

a socket within the lower base or the upper base wherein the socket is sized to receive one or more teeth of the user.

Claim 89 (New): The dental appliance of Claim 87 further comprising:

a slot within the lower base or the upper base wherein the slot is sized to receive one or more teeth of the user.

Claim 90 (New): The dental appliance of Claim 87 further comprising:

lingual tabs extending from the lower base or the upper base wherein the lingual tabs extend rearward into the mouth.

Claim 91 (New): The dental appliance of Claim 87 further

comprising:

ribs formed within the upper base or the lower base wherein the ribs guide the teeth into a correct position.

Claim 92 (New): A dental appliance worn in a mouth of a user having an upper arch having upper teeth and a lower arch having lower teeth, the dental appliance comprising:

a generally U-shaped upper base which contacts the upper teeth of the user when the upper base is worn;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn;

an attachment within the lower base or the upper base; and

a hinge connecting the upper base and the lower base.

Claim 93 (New): The dental appliance of Claim 92 further comprising:

a socket within the lower base or the upper base wherein the socket is sized to receive one or more teeth of the user.

Claim 94 (New): The dental appliance of Claim 92 further comprising:

a slot within the lower base or the upper base wherein the slot is sized to receive one or more teeth of the user.

Claim 95 (New): The dental appliance of Claim 92 further comprising:

lingual tabs extending from the lower base or the upper base wherein the lingual tabs extend rearward into the mouth.

Claim 96 (New): The dental appliance of Claim 92 further comprising:

ribs formed within the upper base or the lower base wherein the ribs guide the teeth into a correct position.

Claim 97 (New): The dental appliance of Claim 92 wherein the attachment is a hook.

Claim 98 (New): The dental appliance of Claim 92 wherein the attachment is a tube.

Claim 99 (New): The dental appliance of Claim 92 wherein the attachment is a clasp.

Claim 100 (New): The dental appliance of Claim 92 further comprising:

elastics or a head gear attached the attachment.

Claim 101 (New): The dental appliance of Claim 92 wherein the attachment secures to the mouth of the user.

Claim 102 (New): The dental appliance of Claim 92 wherein the attachment is constructed from metal or plastic.

Claim 103 (New): A dental appliance worn by a user having teeth wherein a space is provided between two of the teeth, the dental appliance comprising:

a generally U-shaped base having a hinge wherein the base

has a lingual surface wherein the lingual surface has a projection or a rib formed wherein the projection or the rib corrects thumb sucking of the patient.

Claim 104 (New): The dental appliance of Claim 103 wherein the projection or the rib is positioned on the lingual surface so as to be adjacent to an incisor when the base is worn.

Claim 105 (New): The dental appliance of Claim 103 wherein the lingual surface is flat in an area surrounding the projection or the rib.

Claim 106 (New): The dental appliance of Claim 103 further comprising:

a lingual tab extending rearward from the base.

Claim 107 (New): The dental appliance of Claim 103 further comprising:

a wire embedded within the base.

Claim 108 (New): The dental appliance of Claim 103 wherein the base is constructed from a moisture-absorbent material.

Claim 109 (New): The dental appliance of Claim 103 further comprising:

a socket within the base wherein the socket is sized to receive one or more teeth of the user.

Claim 110 (New): The dental appliance of Claim 78 further comprising:

ribs formed within the lower base wherein the ribs guide the teeth into a correct position.

Claim 111 (New): The dental appliance of Claim 78 wherein the lower base is constructed from a moisture-absorbent material.

Claim 112 (New): A dental appliance worn in a mouth of a user having an upper arch having upper teeth and a lower arch having lower teeth, the dental appliance comprising:

a generally U-shaped upper base which contacts the upper teeth of the user when the upper base is worn;

a generally U-shaped lower base adjacent to the upper base wherein the lower base contacts lower teeth of the user when the lower base is worn;

a cavity formed within the upper base or the lower base wherein the cavity is sized to receive a tongue of the user; and

a hinge connecting the upper base and the lower base.

Claim 113 (New): The dental appliance of Claim 112 further comprising:

a socket within the lower base or the upper base wherein the socket is sized to receive one or more teeth of the user.

Claim 114 (New): The dental appliance of Claim 112 further comprising:

a slot within the lower base or the upper base wherein the slot is sized to receive one or more teeth of the user.

Claim 115 (New): The dental appliance of Claim 112 further comprising:

lingual tabs extending from the lower base or the upper base wherein the lingual tabs extend rearward into the mouth.

Claim 116 (New): The dental appliance of Claim 112 further comprising:

ribs formed within the upper base or the lower base wherein the ribs guide the teeth into a correct position.